CLAIMS

It is claimed:

1. A device comprising:
a reflector;
a first dielectric layer disposed over the reflector; and
a thin film resistor formed over the first dielectric layer.

2. The device of claim 1, wherein said reflector comprises a refractory metal.

3. The device of claim 2, wherein said refractory metal comprises tungsten (W), molybdenum (Mo), tantalum (Ta), Rhenium (Re), and/or Niobium (Nb).

4. The device of claim 1, wherein said reflector substantially reflects a laser energy used to laser trimming said thin film resistor.

5. The device of claim 1, wherein the thickness of said first dielectric layer is at a pre-determined thickness range which optimizes the laser trimming of said thin film resistor.

6. The device of claim 1, wherein said first dielectric layer comprises silicon dioxide (SiO_2) and/or silicon nitride (Si_3N_4).

7. The device of claim 1, wherein said thin film resistor comprises chromium silicon (CrSi), nickel chromium (NiCr), and/or tantalum nitride (TaN).

8. The device of claim 1, further comprising a second dielectric layer disposed over the thin film resistor.

9. The device of claim 8, wherein the thickness of said second dielectric layer is at a pre-determined thickness range which optimizes the laser trimming of said thin film resistor.

10. The device of claim 9, wherein said second dielectric layer comprises silicon dioxide (SiO_2) and/or silicon nitride (Si_3N_4).

11. The device of claim 1, further comprising a metal-insulator-metal (MIM) capacitor.

12. The device of claim 11, wherein a plate of said MIM capacitor is at a same layer as that of said reflector.

13. The device of claim 12, wherein said plate comprises an upper plate of said MIM capacitor.

14. A method comprising:
forming a reflector;
forming a first dielectric layer over said reflector; and
forming a thin film resistor over said first dielectric layer.

15. The method of claim 14, wherein forming said reflector comprises:
forming a reflective layer;
forming a mask layer over said reflective layer;
patterning and developing said mask layer to form a mask; and
etching said reflective layer except a portion underlying said mask, wherein said portion of said reflective layer comprises said reflector.

16. The method of claim 15, wherein said reflective layer comprises a refractory metal.

17. The method of claim 16, wherein said refractory metal comprises tungsten (W), molybdenum (Mo), tantalum (Ta), Rhenium (Re), and/or Niobium (Nb).

18. The method of claim 14, further comprising directing a laser energy to trim said thin film resistor, wherein said reflector substantially reflects said laser energy towards said thin film resistor.

19. The method of claim 18, wherein the thickness of said first dielectric layer is at a pre-determined thickness range which optimizes the laser trimming of said thin film resistor.

20. The method of claim 14, wherein said first dielectric layer comprises silicon dioxide (SiO_2) and/or silicon nitride (Si_3N_4).

21. The method of claim 14, wherein forming said thin film resistor comprises:
forming a thin film resistive layer over said first dielectric layer;
forming a mask layer over said thin film resistive layer;
patterning and developing said mask layer to form a mask; and
etching said thin film resistive layer except a portion under said mask, wherein said portion comprises said thin film resistor.

22. The method of claim 21, wherein said thin film resistive layer comprises chromium silicon (CrSi), nickel chromium (NiCr), and/or tantalum nitride (TaN).

23. The method of claim 14, further comprising forming a second dielectric layer over said thin film resistor.

24. The method of claim 23, further comprising directing a laser energy to said thin film resistor, wherein the thickness of said second dielectric layer is at a pre-determined range which optimizes the laser trimming of said thin film resistor.

25. The method of claim 23, wherein said second dielectric layer comprises silicon dioxide (SiO_2) and/or silicon nitride (Si_3N_4).

26. The method of claim 14, further comprising forming a metal-insulator-metal (MIM) capacitor.

27. The method of claim 26, wherein forming said MIM capacitor comprises:

forming a first capacitor plate;

forming a second capacitor plate; and

forming an insulating layer between said first and second capacitor plates.

28. The method of claim 27, wherein forming said second capacitor plate comprises:

forming an electrically-conductive layer;

forming a mask layer over said electrically-conductive layer;

patterning and developing said mask layer to form first and second masks; and

etching said electrically-conductive layer except first and second portions thereof which respectively underlie said first and second masks, wherein said first portion comprises said second capacitor plate and said second portion comprises said reflector.

29. The method of claim 28, wherein said second capacitor plate comprises an upper capacitor plate of said MIM capacitor.